NOTES ON *MAGILUS* AND ITS ALLIES, SUBSTITUTING THE GENERIC NAME *MAGILOPSIS* FOR *LEPTOCONCHUS LAMARCKI*, DESHAYES.

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A careful study of a considerable number of shells of this family has convinced me that the genus *Magilus* is restricted to the one tube-forming species, *M. antiquus*, Montfort.

The shell of *Magilus* is so well known that it would seem scarcely needful for me to describe it here; but in order to justify the conclusion at which I have arrived concerning the undeveloped shells, etc., and the variation in the adults, being the results of circumstances in their position and development, it is needful to recapitulate some facts concerning this remarkable mollusc. The young shell, varying much in form, lodges in a crypt in the coral (*Meandrina*), in which it is quite free from any attachment; subsequently developing with the growth of the coral, quitting the spiral, and forming a long tube, bringing the aperture near the surface of the coral; the spiral whorls (and in some cases several inches of the tube) are filled with a solid heavy mass of shell, whereas the young shell, before forming the tube, is quite thin and fragile.

Magilus antiquus, Montfort, Conch. Syst., tom. ii, 1810, p. 43; Lamarck, Animaux sans Vertèbres, vol. v, 1818, p. 374; Sowerby, Conch. Icon., vol. xviii, 1872 (*Magilus*), fig. 2.

One specimen in my collection is worthy of notice, showing that in some cases the shell grows faster than the coral. After proceeding vertically for a couple of inches, it suddenly turns off to the right (partly covering the shell of another in the same direction), it then takes a semicircular sweep, bringing its aperture within a quarter of an inch of the top of the coral.

Synonyms.

Magilus microcephalus, Sowerby, Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. ii, fig. 3.

I must take upon myself the onus of having introduced this spurious species, described and figured by my revered father. The specimen came from the collection of a great collector in Holland (Mr. van Lennep). I then thought it a distinct species, and suggested the name. I am now, however, convinced that the extreme smallness of the spiral portion is to be accounted for by the early and probably rapid growth of the coral, causing the animal to quit, in very early life, its spiral form to avoid being entombed. I have in my collection a specimen which might, with equal propriety, bear the name "*macrocephalus*". It has five whorls, and measures, from apex

[1] Most of the specimens mentioned were exhibited on the reading of this paper.

to base, nearly an inch and a half, with a diameter of an inch; whereas the specimen called *microcephalus* has only 2½ whorls, and measures only about three-eighths of an inch. Of course, there are many intermediates, differing from each other widely in form, but which cannot be separated on any specific basis.

Magilus costatus, Sowerby, Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. ii, fig. 5.

Here again I must deny the validity of my father's species. The type in the British Museum has rough elevated longitudinal ridges, giving it an appearance very different from the ordinary *M. antiquus*; but I have a specimen in which the ridges, though not quite so prominent, are well developed, and others in which the ridges, though comparatively faint, are plainly discernible. I have yet other specimens exhibiting very close sharp transverse ridges without the slightest trace of longitudinal ridges.

The following I take to be simply the young of *M. antiquus*:—

Genus Leptoconchus, Ruppell, Proc. Zool. Soc. Lond., ii, 1834, p. 105.

Leptoconchus cumingi, Deshayes, in Maillard, I. de la Réunion, ed. 2, ii E, p. 125, pl. xii, figs. 26, 27.

Leptoconchus cuvieri, Deshayes, in Maillard, I. de la Réunion, ed. 2, ii E, p. 128, pl. xiii, figs. 6, 7.

Leptoconchus ellipticus, Sowerby, Genera of Shells; Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. iii, fig. 7.

Magilus globulosus, Sowerby, Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. iv, fig. 10.

Magilus peronii, Lamarck, Anim. s. Vert., vol. v, 1818, p. 374.

Magilus rostratus, A. Adams, Ann. Mag. Nat. Hist., ser. III, vol. xiii, 1864, p. 310.

Leptoconchus ruppellii, Deshayes, in Maillard, I. de la Réunion, ed. 2, ii E, p. 126, pl. xiii, figs. 4–5; Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. iv, fig. 11.

Magilus serratus, Sowerby, Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. iii, fig. 8.

Leptoconchus striatus, Ruppell, Trans. Zool. Soc. Lond., i, 1835, p. 259, pl. xxxv, figs. 9, 10.

Magilus solidiusculus, Sowerby, Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. iv, fig. 12 (Pease, MS.? in Brit. Mus.).

Of these forms the first mentioned, *L. cumingi*, is so different in appearance from the others that I had some hesitation in including it. It has a more elevated spire, and the basal keel has scarcely begun to show, but having met with a developed *Magilus* of the same form I hesitate no longer.

Genus Coralliobia, H. & A. Adams, Gen. Shells, vol. i, p. 138. Type.—*Concholepas* (*Coralliobia*) *fimbriata*, A. Adams, Proc. Zool. Soc., 1852, p. 93.

Magilus fimbriatus, Sow., Reeve, Conch. Icon., vol. xviii, 1872 (*Magilus*), pl. iii, fig. 9.

The genus *Corallioba* seems to have little, if any, affinity with *Magilus*. I have a specimen in situ, and instead of occupying a crypt it is firmly fixed on the top of the meandrina, almost appearing to be a part of the coral, and there remains underneath but a small hiatus for the projection of the head and tentacles. There are specimens in the British Museum unattached, but they have the same characters.

CORALLIOBIA ROBILLARDI (Lienard).

Leptoconchus robillardi, Lienard, Journ. de Conch., vol. xviii, 1870, p. 305.

The surface of this shell is strongly elaborately cancellated. The cancellating ridges are closer and less elevated than in *C. fimbriata*. Its anterior end is produced, forming a rostrum and canal.

This species has been called a variety of *C. fimbriata*, but having seen a large number of specimens it appears to me specifically distinct.

Genus MAGILOPSIS, nom. nov. Type. — *Leptoconchus lamarcki*, Deshayes, in Maillard, I. de la Réunion, ed. 2, iiE, p. 127, pl. ii, figs. 1–3.

I cannot place this remarkable form with *Magilus*, and since the name *Leptoconchus* cannot now be used a new generic name is necessary.

The shell is an elongated pyriform, with an elate rounded spire and a rather long rostrum at the anterior end. The operculum, which I have seen in many specimens collected by M. V. de Robillard, of Mauritius, is of a thin transparent substance, fitting in, and nearly filling the aperture of the shell; it is finely concentrically laminated, narrowed at each end, with its nucleus near the right-hand side.

M. MAILLARDI, Deshayes, in Maillard, I. de la Réunion, ed. 2, iiE, p. 124 (*Leptoconchus*), pl. xii, figs. 28, 29.

I cannot pronounce with any certainty on the position of this curious shell, but, since it has much the look of an abnormality, I place it here, and it may prove to be an abnormal form of *M. lamarcki*.

In conclusion I note that M. Deshayes[1] informs us that *Magilus* has an operculum, and that *Leptoconchus* has none. Now it is a curious fact that hundreds of specimens having passed through my hands during more than half a century I have never seen the operculum of a *Magilus*; while at least one of M. Deshayes' species of *Leptoconchus* is, as I have shown, distinctly operculate. There are two other species regarded as *Leptoconchus*, viz. *Coralliobia fimbriata* and *C. robillardi*, having opercula. The opercula of these species are very small in comparison with the aperture of the shells, measuring scarcely 4 × 2 mm., very thin and transparent.

[1] Deshayes in Maillard, I. de la Réunion, vol. ii E, p. 118.